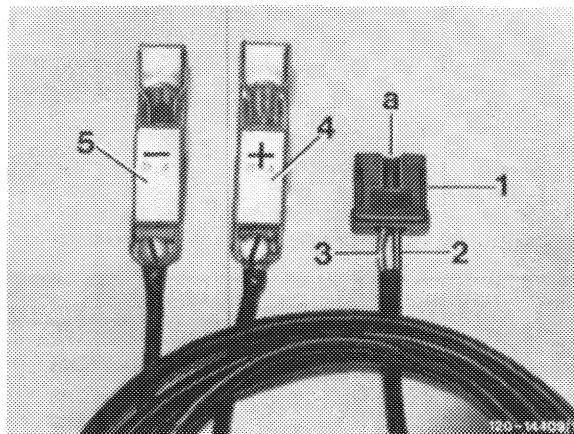


Self-made tools

- 1 Coupling part no. 002 545 49 28
- 2 Line black 1.5 mm dia. approx. 1 m long
- 3 Line brown 1.5 mm dia. approx. 1 m long
- 4 Cable terminal +
- 5 Cable terminal -
- a Locating groove

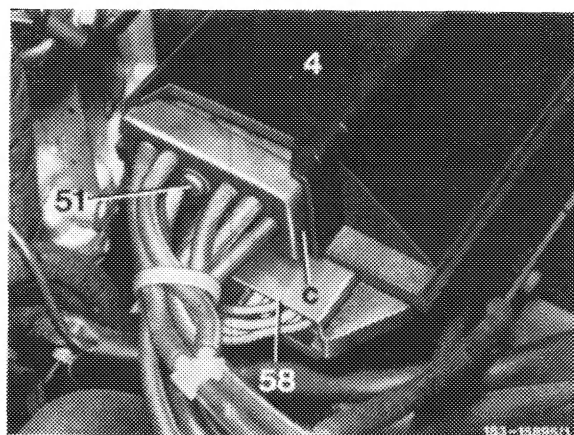


A. Regulating valve

Removal

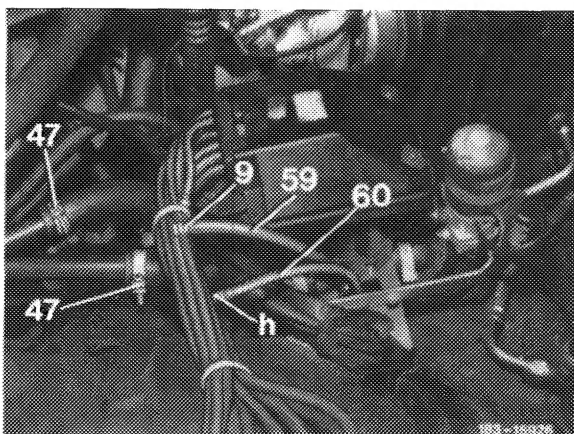
- 1 Drain coolant.
- 2 Unscrew screw (51) from vacuum plug (c) and pull off vacuum plug.
- 3 Pull off electrical plug (58), paying attention to safety hooks. Hooks are located at bottom of plug.

- | | |
|--------------------|--------------------|
| 4 Regulating valve | 58 Electrical plug |
| 51 Screw | c Vacuum plug |



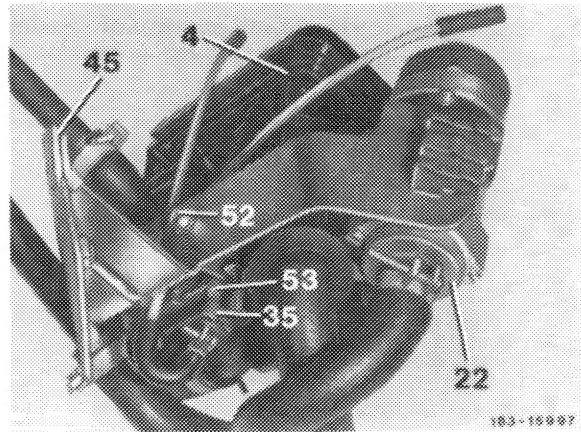
- 4 Loosen hose clips (47) and pull water hoses from pipe line.
- 5 Pull off vacuum lines (59 and 60) to temperature switch (35) at distributors (g and h).

- | |
|-----------------------|
| 35 Temperature switch |
| 47 Hose clips |
| 59 Vacuum lines |
| 60 Vacuum lines |
| g Distributor |
| h Distributor |



6 Unscrew holder (45) on wheel housing panel. Then unscrew screws (52) and remove regulating valve from holder.

7 Remove vacuum lines from temperature switch (35).

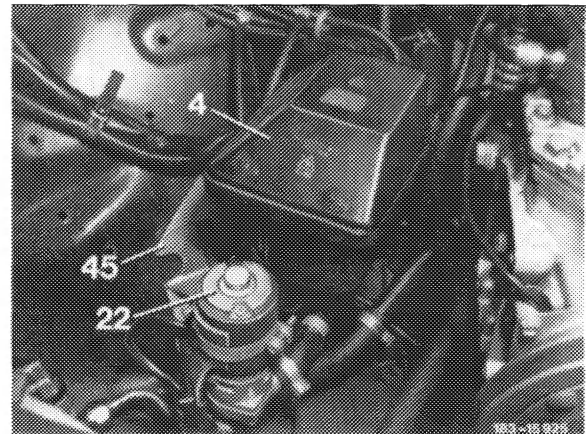


Installation

8 Attach vacuum lines to temperature switch (35). Pay attention to varying thickness of vacuum lines.

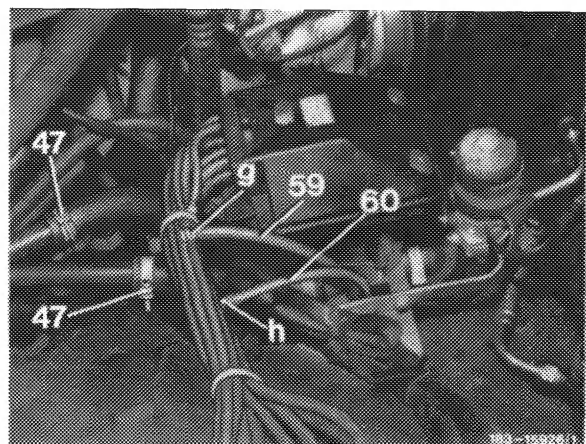
9 Screw regulating valve to holder (45) by means of screws (52).

10 Attach holder (45) with regulating valve (4) and heating water pump (22) to wheel house panel.



- 4 Regulating valve
- 22 Heating water pump
- 45 Holder

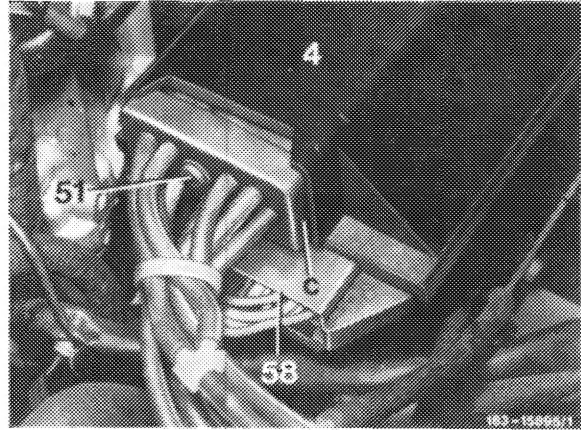
11 Mount hose lines on pipe line and tighten hose clips (47).



- 35 Temperature switch
- 47 Hose clip
- 59 Vacuum line (red)
- 60 Vacuum line (red/green)
- g Distributor
- h Distributor

12 Mount electrical plug (58) and vacuum plug (c).

51 Screw
58 Electrical plug
c Vacuum plug



13 Add coolant and check hose connections for leaks.

14 Bleed cooling system, while bridging temperature switch (21) for heating water pump (83–690) or by connecting heating water pump directly to vehicle battery by means of self-made harness. Push “DEF” button and run engine at approx. 2000/min until operating temperature of engine is attained.

15 Check operation of automatic climate control.

B. Temperature switch (cold engine lock)

Data

Switch-on point

40 °C (104 °F) coolant temperature

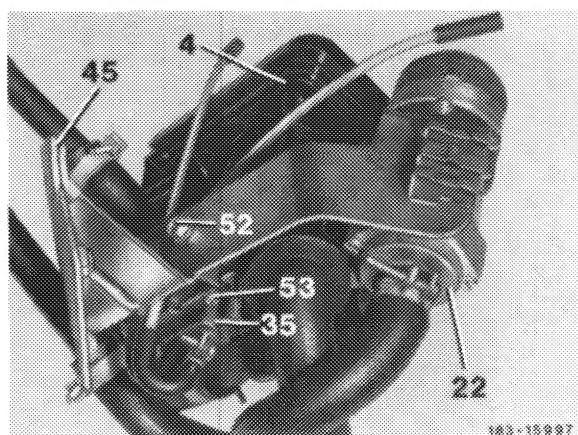
Removal

1 Remove regulating valve (refer to section A).

2 Unscrew screws (53).

3 Remove temperature switch (35).

4 Regulating valve
22 Heating water pump
35 Temperature switch
45 Holder
53 Screw



Installation

- 4 Check gasket and replace, if required.
- 5 Screw temperature switch (35) to regulating valve with screws (53), paying attention to locating cam.
- 6 Install regulating valve (refer to section A).

Heating water circuit

